



# **Lead and Copper Rule - Clarification of Requirements for Collecting Samples and Calculating Compliance Fact Sheet**

EPA 810-F-04-001

EPA is releasing a guidance memorandum to reiterate and clarify specific regulatory requirements for lead in drinking water. The guidance memorandum is intended for EPA regional and state staff who work in the drinking water program. The audience also includes water utilities who are subject to the regulations.

EPA has been conducting a national review of implementation of the Lead and Copper Rule (LCR) since early 2004. Our review thus far has identified several issues associated with the collection and management of monitoring samples and calculation of the 90th percentile for compliance. The memo reiterates requirements of the regulation and clarifies several areas where there has been confusion.

The Agency is continuing to carry out its national review of implementation which is aimed at determining whether changes are needed to existing guidance or regulations. The national review includes evaluation of the data EPA collects under the LCR, an analysis of how states are implementing the rule. As part of the review, national expert workshops were held on monitoring, lead service line replacement, public education, and simultaneous compliance. EPA is also working with state and local authorities related to monitoring for lead in schools and daycare facilities.

To assure corrosion control treatment technique requirements are effective in protecting public health, the rule also established an Action Level (AL) of 15 ppb for lead in drinking water. Systems are required to monitor a specific number of customer taps, according to the size of the system. Results of monitoring are used to determine the concentration at the 90th percentile (e.g., if 100 samples collected, the concentration at the 90th highest sample). If the 90th percentile exceeds 15 ppb, the system must undertake a number of additional actions to control corrosion and to inform the public about steps they should take to protect their health.

EPA's review of state programs and press reports identified inconsistencies in how utilities and states are carrying out the regulation. Although EPA is carrying out an extensive review to determine if changes are needed to guidance or regulations, it was clear that there was confusion about the existing requirements. We made the decision to release a memo at this time to remind states and utilities of the requirements and to clarify several areas in which there appears to be some confusion with respect to those requirements.

The memorandum answers the following questions, making reference to regulatory citations. The answers below are simplistic summaries of the full responses to the questions. Interested readers are recommended to refer to the seven page memorandum for complete answers.

**What samples are used to calculate the 90th percentile?**

The memo indicates that results from all samples that are part of a system's targeted sampling pool (sites with the greatest potential for lead leaching) must be used for the calculation of the 90th percentile.

**What should utilities do with sample results from customer-request sampling programs?**

The memo indicates that samples collected under these programs should not be used to calculate the 90th percentile, except in cases where the system is reasonably able to determine that the site selection criteria for compliance sampling are satisfied.

**What should states do with samples taken outside of the sampling compliance period?**

The memo indicates that only those samples collected during the compliance monitoring period may be included in the 90th percentile calculation. However, samples collected outside the sampling compliance period must still be provided to the state.

**What should states do to calculate compliance if the minimum number of samples are not collected?**

States must calculate the 90th percentile even if the minimum number of samples are not collected. A system which fails to collect the minimum required number of samples incurs a monitoring and reporting violation and is thus required to conduct Public Notification.

**What is a proper sample?**

The memo reiterates that the rule defines a proper sample as a first draw sample, 1 liter in volume, that is taken after water has been standing in plumbing for at least six hours, and from an interior tap typically used for consumption – cold water kitchen or bathroom sink tap in residences. There is no outer limit on standing time.

**How can utilities avoid problems with sample collection?**

The memo recommends steps utilities can take to avoid analysis of improper samples.

**On what grounds may a sample be invalidated?**

The memo reiterates the criteria that allow a sample result to be invalidated and makes the point that sample results cannot be invalidated based on homeowner sampling error.

**Background on the Lead and Copper Rule**

The LCR has four main functions: (1) require water suppliers to optimize their treatment system to control corrosion in customers' plumbing; (2) determine tap water levels of lead and copper for customers who have lead service lines or lead-based solder in their plumbing system; (3) rule out the source water as a source of significant lead levels; and, (4) if action levels are exceeded, require the suppliers to educate their customers about lead and suggest actions they can take to reduce their exposure to lead through public notices and public education programs. If a water system, after installing and optimizing corrosion control treatment, continues to fail to meet the lead action level, it must begin replacing the lead service lines under its ownership. Large systems serving more than 50,000 people were required to conduct studies of corrosion control and to install the state-approved optimal corrosion control treatment by January 1, 1997. Small and medium sized systems are required to optimize corrosion control when monitoring at the consumer taps shows action is necessary.